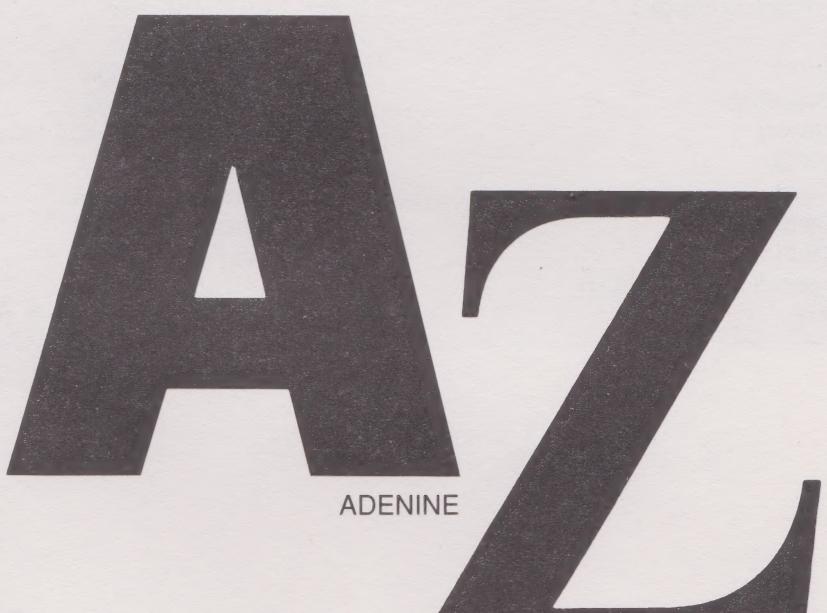


# SCIENCE



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## NOTES

1 This index refers to all the material contained in the texts of Units 1 to 32 of S102. The supplementary material (Summer School Laboratory Notebooks, CALCHEM Notes, etc.) is not indexed.

2 For each entry, the page references for each Unit in which the entry appears follow the Unit number, which is printed in **bold**.

3 Flagged terms are printed in **bold**. Numbers of Units in which these terms are flagged are denoted by an asterisk. For example, the entry **polar solvents**, 13–14\*, 68; 17–18, 23 tells you that the term polar solvents is flagged in Units 13–14 on page 68, and that it also occurs on page 23 of Units 17–18.

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## USEFUL INFORMATION FOR S102

### THE GREEK ALPHABET

alpha	<i>A</i>	$\alpha$	iota	<i>I</i>	$\iota$	rho	<i>P</i>	$\rho$
beta	<i>B</i>	$\beta$	kappa	<i>K</i>	$\kappa$	sigma	$\Sigma$	$\sigma$
gamma	<i>G</i>	$\gamma$	lambda	<i>L</i>	$\lambda$	tau	<i>T</i>	$\tau$
delta	<i>D</i>	$\delta$	mu	<i>M</i>	$\mu$	upsilon	<i>Y</i>	$\nu$
epsilon	<i>E</i>	$\varepsilon$	nu	<i>N</i>	$\nu$	phi	$\Phi$	$\phi$
zeta	<i>Z</i>	$\zeta$	xi	<i>X</i>	$\xi$	chi	<i>X</i>	$\chi$
eta	<i>H</i>	$\eta$	omicron	<i>O</i>	$\circ$	psi	$\Psi$	$\psi$
theta	$\Theta$	$\theta$	pi	$\Pi$	$\pi$	omega	$\Omega$	$\omega$

### SI UNITS USED IN S102

Physical quantity	Name of unit	Symbol	Physical quantity	Name of unit	Symbol
length	metre	m	electric current	ampere	A
mass	kilogram	kg	temperature	kelvin	K
time	second	s	amount of substance	mole	mol

### PREFIXES FOR MULTIPLES OF UNITS

Mult. factor	Prefix	Symbol	Mult. factor	Prefix	Symbol
$10^{-1}$	deci	d	$10^1$	deca	da
$10^{-2}$	centi	c	$10^2$	hecto	h
$10^{-3}$	milli	m	$10^3$	kilo	k
$10^{-6}$	micro	$\mu$	$10^6$	mega	M
$10^{-9}$	nano	n	$10^9$	giga	G
$10^{-12}$	pico	p	$10^{12}$	tera	T
$10^{-15}$	femto	f	$10^{15}$	peta	P

### DERIVED SI UNITS USED IN S102

Physical quantity	Name of derived unit	Symbol	Derived unit (in SI)
force	newton	N	$\text{kg m s}^{-2} = \text{J m}^{-1}$
energy	joule	J	$\text{kg m}^2 \text{s}^{-2} = \text{N m}$
power	watt	W	$\text{J s}^{-1}$
electric charge	coulomb	C	$\text{A s}$
electric potential difference	volt	V	$\text{J A}^{-1} \text{s}^{-1}$
magnetic field strength	tesla	T	$\text{N m}^{-1} \text{A}^{-1}$
frequency	hertz	Hz	$\text{s}^{-1}$

### S102 UNITS

1	Science and the planet Earth	19	Life and evolution
2	Measuring the Solar System	20	Inheritance and cell division
3	Motion under gravity	21	Genes and evolution
4	Practical work in science	22	Biochemistry
5–6	Into the Earth: earthquakes, seismology and the Earth's magnetism	23	Physiology
7–8	Plate tectonics: a revolution in the Earth sciences	24	DNA: molecular aspects of genetics
9	Energy	25	Ecology
10	Modelling the behaviour of light	26	Biology reviewed
11–12	Atomic structure	27	Earth materials and processes
13–14	Chemical reactions and the Periodic Table	28–29	Geological time and Earth history
15	Chemical equilibrium	30	Quantum mechanics: an introduction
16	Chemical energetics	31	Quantum mechanics: atoms and nuclei
17–18	The chemistry of carbon compounds	32	The search for fundamental particles